

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

1. (Currently Amended) An active spacecraft antenna metal free thermal control film comprising:

a multi-layer interference filter having alternating high and low refractive index non-metallic layers, said control film exhibiting preselected high absorbency and emissive characteristics in the far infrared wavelength range 2.5 $\mu$ m to 50 $\mu$ m, low absorbency characteristics in the solar spectrum range 200-2500nm and high transmissive characteristics in the microwave frequency spectrum 1 to 30GHz.

2. - 3. (Cancelled)

4. (Previously Presented) A thermal control film according to claim 1, wherein the film is in the form of a flexible sheet.

5. (Canceled)

6. (Previously Presented) A thermal control film according to claim 1 wherein the multi-layer interference filter is a polymeric structure.

7. (Previously Presented) A thermal control film according to claim 1, wherein the multi-layer interference filter comprises one or more layers of any of combination of  $\text{SiO}_2$ ,  $\text{SiO}_x\text{N}_y$ , and  $\text{Si}_3\text{N}_4$ .

8. (Original) A thermal control film according to claim 7, wherein the film is in the form of a plurality of tiles.

9. (Previously Presented) A thermal control film according to claim 1, wherein the thickness of the film is less than 200microns.

10. (Previously Presented) A thermal control film according to claim 1, wherein the thickness of the film is in the range of 50 to 150microns.

11. (Previously Presented) An antenna comprising a thermal control film according to claim 1, covering the active face thereof.

12.-13. (Cancelled)

14. (Previously Presented) A thermal control film according to claim 13 wherein the multi-layer interference filter is a polymeric structure.

15. (Previously Presented) A thermal control film according to claim 14, wherein the multi-layer interference filter comprises one or more layers of any of combination of  $\text{SiO}_2$ ,  $\text{SiO}_x\text{N}_y$ , and  $\text{Si}_3\text{N}_4$ .

16. (Previously Presented) A thermal control film according to claim 15, wherein the film is in the form of a plurality of tiles.

17. (Previously Presented) A thermal control film according to claim 16, wherein the thickness of the film is less than 200microns.

18. (Previously Presented) A thermal control film according to claim 17, wherein the thickness of the film is in the range of 50 to150microns.

19. (Previously Presented) An antenna comprising a thermal control film according to claim 18, covering the active face thereof.

20. (Previously Presented) A thermal control film according to claim 3, wherein the film is in the form of a flexible sheet.